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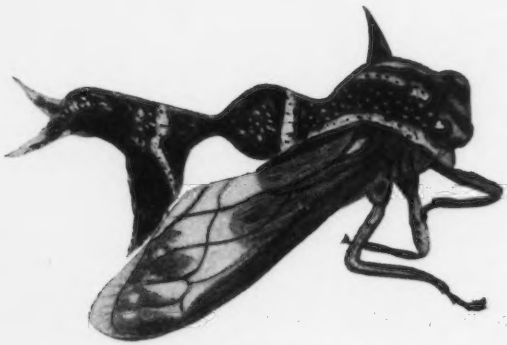
ENTOMOLOGICAL NEWS



Heteronotus vulnerans.

DECEMBER, 1903.

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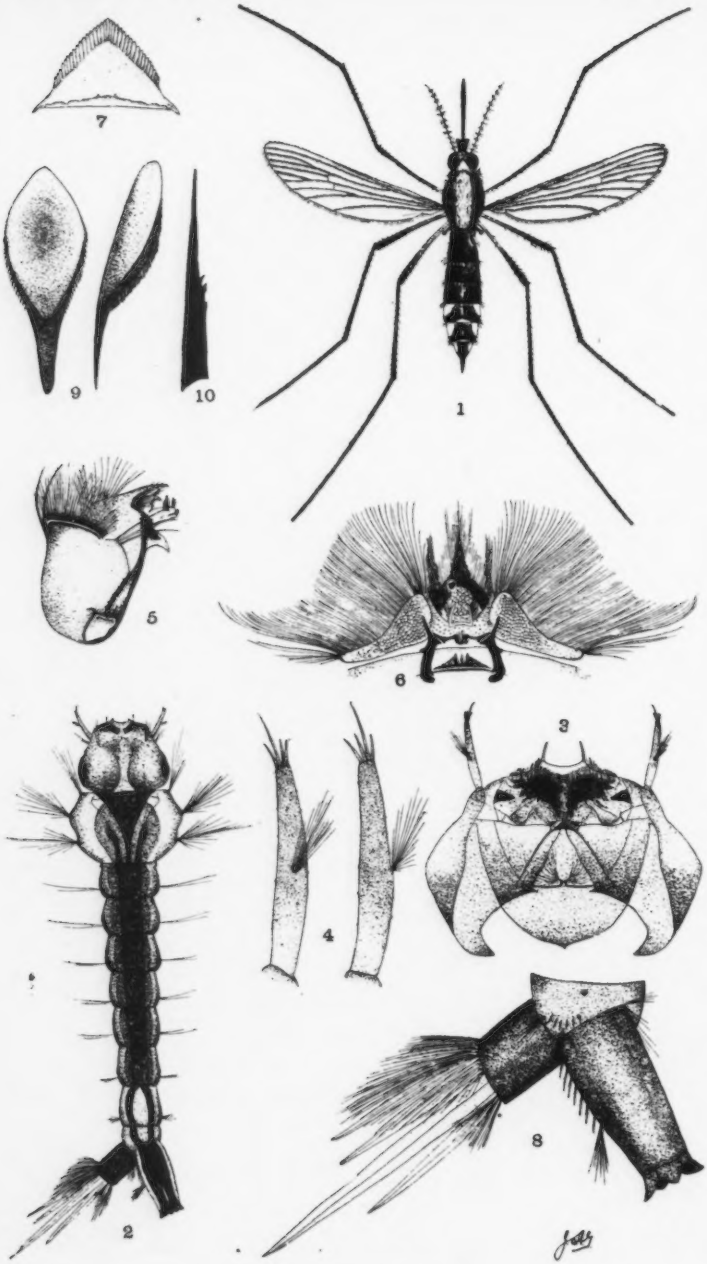

CULEX SERRATUS THEOB.

ENTOMOLOGICAL NEWS

AND

PROCEEDINGS OF THE ENTOMOLOGICAL SECTION

ACADEMY OF NATURAL SCIENCES, PHILADELPHIA.

VOL. XIV. DECEMBER, 1903. No. 10.

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Notes on Culex Serratus Theob., and its Early-Stages.

BY JOHN B. SMITH.

(With Plate XV.)

Culex serratus is a moderate-sized black mosquito, originally described from South America, and characterized by a silvery-white stripe through the middle of the thorax. The posterior segments of the abdomen are also white-marked laterally, the extent of the maculation and the number of segments involved varying somewhat. Figure 1 of plate xv represents a normal specimen.

The first inkling that this species occurred in New Jersey came when Mr. Clarence Van Duersen, an office assistant, was sent into a low swampy woodland near New Brunswick, July 29th, to collect whatever mosquito larvæ could be found there. Among other things, he brought back a robust blackish larva, conspicuous by a white-marked thoracic region and a white ring, comprising two abdominal segments, just before the anal siphon. These were at once separated out from the other forms as unknown, and with them were associated a number of pupæ that appeared to belong with them. From the pupæ

6 ♂ and 4 ♀ *serratus* emerged July 30th, and 5 ♀ emerged August 1st. Some of the larvæ pupated July 31st, and August 3d, 2 ♀ *serratus* emerged, so that the connection between the white-banded larva and *serratus* adults was fully established. The determination of the adult was suggested doubtfully by Mr. Dickerson and confirmed, independently, by Mr. D. W. Coquillett. August 13th another lot of mixed larvæ and pupæ were brought in. One full-grown larva was isolated and pupated a few minutes later, leaving a larval skin which was mounted in balsam. Adult from this pupa issued August 19th—a six-day pupal period. Other adults from the mixed lot of pupæ emerged August 15th,—6 ♂ and 1 ♀.

A few larvæ were collected September 3d, and then the pools dried up: adults were taken in the woods, near the dried-up pools, September 14th. Rain having filled the pools soon after, another collection was made September 30th, containing larvæ and pupæ. Adults emerged: 2 ♂, 1 ♀, October 3d; 7 ♂, 9 ♀, October 5th.

While collecting in the woodland pools of the Great Piece Meadow, an extensive Swamp area bordering the Passaic River, Mr. John Grossbeck took *serratus* larvæ, full and half grown, September 9th and 10th. Pupation began September 12th, and the first adult emerged September 17th. Others emerged September 21st, before the culture was closed. Another lot of mixed pupæ was taken September 11th, and 7 ♂ and 1 ♀ *serratus* emerged during the two days following.

During early September, Mr. Henry L. Viereck took adult *serratus* at Cape May Point, but did not find the larvæ.

The species therefore ranges the full length of the State of New Jersey, probably breeding nearly or quite always in temporary woodland pools, while the adults rarely leave the vicinity of the places that gave them birth. It is certain that I never received any with the miscellaneous lot of material collected near and in towns and villages.

The larva is well shown by figure 2, and is 6–7 mm. in length excluding the anal siphon. The head is dark brown, widest at the eyes, tapering anteriorly and somewhat flattened in front. Antennæ not quite half the length of the head,

thickest at the basal third, and terminated by four articulated spines, one of which is much longer than the others. A tuft of hair issues from a tubercle at about half its length from base. Details of the head structure are shown at figures 3, 4, 5, 6 and 7, and all these are drawn from a cast larval skin. The antennae (figure 4) are consequently a little stouter than normal, and the maxillary structures at 6 rather more widely spread. The mandible at 5 and mentum at 7 are accurate. The hair of maxillary fans is simple.

The thorax is angular, wider than long, color white with a median black portion becoming wide anteriorly. Abdomen blackish except segments 7 and 8, which are white. Anal segment and siphon black. The siphon is just about twice as long as wide, is a little dilated before the middle, and has the valves a little dilated, so as to flare the tip. Figure 2 is more accurate as to proportion; figure 8 is from a cast skin and, being flattened out, is a little broader than natural. The anal gills are long and slender, pointed at tip, without obvious tracheæ. The two rows of spines on the siphon consist of seven each, essentially like figure 10, though there is a little variation. The patch on the eighth segment consists of five scales on each side, shaped as in figure 9 and arranged as shown in figure 8.

So characteristic is this larva in appearance that it would seem to be difficult to mistake it. The pupa has not been studied.

A New Saturnia from North America.

By Rodrigues Ottolengui.

Saturnia (**Agapema** Neum. and Dyar) **anona** sp. nov.

Male.—Antennæ brown, of a slightly orange tinge. Thorax and body rich dark brown. Fore wings the same, slightly lighter. Basal line white, wide, angulated, inclosing a brown base. This line may be clear and clean, or it may be produced on the veins as white lines extending from it across to the median white band. Again the white veins may be only two in number, forming a white > of which the apex touches the angle of the line while the ends cross the median space and touch the median white band, the upper one just in contact with the ocellus. A

median white band crosses from near the apex to the center of the hind margin, passing around and touching the ocellus. Where the band passes the ocellus there may be a white spur extending from the band just above and around the ocellus for a brief distance, or the white may be produced along the vein at this point thus inclosing a brown spot between the white and the corner of the ocellus. There is a subterminal band of white, clear cut along both edges and distinct against the brown field, which latter shows beyond it as a brown margin to the wing, in some specimens very slightly tinged with a paler shade. Between the median and subterminal bands there is an almost invisible waving fine line. Indeed it is probable that this line occurs only on the under side and shows through. On the discal nervure there is a conspicuous round ocellus with a slightly hyaline central streak. The outer border of the ocellus is black, inclosing a narrow circle of orange and outwardly a bluish crescent. Apically there is a blackish blotch and a crimson dash, these marks however apparently having no specific value. Secondaries: basal two-thirds tinged with white making the basal area very much lighter; this area terminates against the outer brown portion of the wing in a series of scallops, one between each pair of veins. Again we have the clear cut subterminal white band leaving the outer margin brown. Within the basal area an ocellus similar to the forewing but smaller.

On the reverse all the wings show more white, and the transverse invisible lines now show as conspicuous fine scalloped white lines. On the secondaries the cell is more or less completely outlined in brown.

Females.—Ornamentation as in the male. All four wings more nearly unicolorous, the basal area in the secondaries, however, being distinctly paler than the outer third. The basal and median bands are paler than in the male, but the subterminal white bands are as bright. The basal band in the forewing is faint, yet shows the same tendency to be produced along the veins. In the secondaries the basal area being browner than in the male the basal and median bands show, the latter being clean instead of scalloped as in the male. The antennæ are bright orange.

Males expand about 50 mm. Females about 60 mm.

Described from three males and three females I have affixed type labels to one male and one female in the collection of the Brooklyn Institute Museum. In these the basal and median lines are not connected. Type labels are also on one male and one female in the collection of Mr. Jacob Doll. In these the veins between the two bands show white.

Habitat Arizona.

The above described species is to be found in many cabinets carrying the specific name *galbina*. Recently, however, Mr. Jacob Doll has captured a large series of the true *galbina* in

Texas. The two forms being quite distinct, it became necessary to determine which was *galbina* and which new. The species has been described at least three times. First by Clemens (Proc. Acad. Nat. Sci. Phila., Vol. 12, 1860 P. 156) and subsequently by Strecker, and again by Neumoegen and Dyar. The original description by Clemens, (probably as Strecker guessed, from a female only) is quite inadequate, characters which are carefully noted having no specific value, while what now prove to be specific characters are indifferently mentioned or else omitted. Two features of the description, however, serve to determine the true species. We are told that "the marginal portion of the wing is whitish and is tinged on the terminal edge with pale yellow." This is true of both sexes in over a hundred specimens taken by Mr. Doll in Texas, the habitat by the way of the specimen from which Clemens wrote his description. In the new species, *anona*, the subterminal white is a distinct band, clean cut on the outer edge, not scalloped as in *galbina*, and the extreme outer margin is brown, as dark as the basal color, not buff or lighter as in *galbina*.

The other point, is not so good, yet may be considered. The original author says of the hind wings, "Hind wings similar in color and ornamentation to the fore wings." This is true of the form taken by Mr. Doll, alluding of course to a female. In *anona* the basal two-thirds of the secondaries, even of the female, is so much lighter that it could scarcely have escaped the attention of the writer.

Strecker mentions the species, *galbina*, and figures both sexes. His specimens were from Texas, and his figures resemble those taken by Mr. Doll. He for the first time describes the male and, while brief, his description fixes the species absolutely.

In Neumoegen and Dyar's N. A. Bombycidæ (P. 125) the species is described under the generic reference *Agapema*. It seems probable, partly from the fact that the true *galbina* was not in the Neumœgen collection, and partly because of one feature of the description, these authors used two of the identical specimens now before me. They mention "basal

line angular, produced on the veins in the male, etc." This is exactly true of *anona*, but in the male of *galbina* there is not really a basal white line or band, but rather the whole base is white, outlined by a brownish angular line.

It remains only for me to point out the differences which easily distinguish the two species. In *anona* the antennæ of male is brown and of female, bright orange. In *galbina* both male and female have pale orange antennæ. In the male of *anona* the brown color predominates; in *galbina* there is more white. In *anona* the white median band in the male touches or even partly surrounds the ocellus; in *galbina* the white band is separated from the ocellus by a streak of brown. In the secondaries of the male, in *anona* the basal area where it touches the outer third of brown (crossed by a white band) forms a gently curved line, corresponding with the median band in the same situation in the female. In *galbina* this band is more easily seen even though the base is whiter, and it has a sharp bend or angle which considerably narrows the brown. But the dominant feature in both sexes is that *galbina* has a pale or yellowish (buff) margin to all four wings, while *anona* shows a well defined brown outer margin. The females of the two species are more similar than the males, but *galbina* has the base of the secondaries practically the same color as the outer third, while in *anona* the base is conspicuously lighter.

Note on Phasmidae.

By A. N. Caudell, Washington, D. C.

My friend, Mr. Rehn, of Philadelphia, has called my attention to the establishment of the phasmid genus *Leptynia* by Pantel in 1890, with *Bacillus hispanica* Bol. as type. This genus would invalidate my recently described *Parabacillus* had I correctly referred *B. hispanica* to it; but, in doing that, I seem to have been in error. While in general these genera are very close, the antennal characters will suffice to separate the Old World *Leptynia* from the New World *Parabacillus*. In the former the antennæ are distinctly segmented, and have

from 15 to 17 segments in the male and 11 to 17 in the female; while in the latter they are very indistinctly segmented, except the first and second segments, and are composed of but seven segments in either sex, the segments beyond the second often so closely connate as to form a single inarticulate club.

A free translation of Pantel's Latin description of the antennæ of *Leptynia* is as follows:

"Male.—Antennæ about one-third as long as the anterior femora, heterogeneous, the second segment no less transverse than in *Bacillus*. The rest of the segments up to the middle of the antennæ notably elongate, the following ones abbreviated. Near the apex, each segment is distinctly transverse. The apical segment either longer than the three preceding ones or of equal length with them.

"Female.—Antennæ short, heterogeneous, segments one, three and five and the apical ones much longer than wide, the rest notably transverse; the apical segment at least equal to the four preceding ones."

In *Parabacillus* the antennæ are variable in length, but usually about the same as in *Leptynia*, apparently composed of seven segments, though those beyond the second are more or less coalesced, often altogether invisibly joined, forming a single club. In the more distinctly segmented specimens the various segments may be comparatively described as follows:

Male.—First segment large, much broader than the rest, about four times longer than wide, flattened, keeled above; 2, distinct, transverse, one-fourth as long as 1; 3, 4, 5 and 6 subequal in length, each as long or a little longer than 1 and 2 together; 7, nearly twice as long as the preceding one, concave on the inner side and sometimes showing very slight indication of being composed of two segments.

Female.—In general, the antennæ are similar to those of the male, but are usually comparatively shorter. Segments 1 and 2 as in the male; 3, equal to 1 and 2 in length; 4, one-half as long as 3; 5 and 6 subequal, each about two-thirds as long as 3; 7, variable, sometimes twice as long as the preceding one and sometimes about equalling it in length. The segments of both sexes are very variable in comparative

lengths and generally very obscure, usually scarcely capable of being distinguished, except the first two, which are very conspicuously separated from each other and from the rest of the antennæ.

Diapheromera arizonensis Caud.

An immature female specimen from Madera Canyon, St. Rita Mountains, Arizona, taken by Mr. E. A. Schwarz in June, 1898, is referred to this species. This species shows cerci similar to those of *Diapheromera femorata*, and not long and slender, as in *D. velii*.

Timema californica Scudd.

On June 9 to 16 of the present year, Mr. H. S. Barber beat this species in some numbers from fir trees in Humboldt County, California, at an altitude of about 1,400 ft. Of the nineteen specimens taken, not one was a male. The males may have clung more tenaciously to the trees, and thus escaped capture, or they may be much scarcer than the females. Mr. Barber states that the living insect is green, like the fir leaves, which they mimic so closely as to be scarcely discernible so long as they remain motionless, which they do for some time after being beaten off the tree into the beating net. They were taken from the lower branches of a clump of large trees, which stood somewhat apart from denser woodland.

Anisomorpha ferruginea Palisot de Beauvois.

My record of this species from Pennsylvania in my recent paper on the Phasmidæ (Proc. U. S. Nat. Mus., xxvi, p. 882) is probably erroneous. The label on the specimens reads "Tallulah, Pa." As no locality of this name exists in the above-mentioned State, Georgia or Louisiana is no doubt intended, as Tallulah occurs in both States.

A Method of Collecting.

By F. M. McElfresh, Salem, Oregon.

While enjoying a few days' rest, I wish to tell the readers of the Entomological News about one method of collecting, which I have never seen mentioned elsewhere. This

unique method of collecting may be followed here in Oregon, and I presume in any mountainous region where large bodies of snow may be found during the summer.

To any lover of nature, especially to one who has been reared in the flat prairies of the Middle West, the Pacific Northwest is a veritable paradise, with its scenery—grander and more picturesque than words can describe. From almost any opening or slight elevation in the Willamette Valley may be seen, towering above the soft, deep blue of the main Cascade Range, from one to six pinnacles of spotless white upon a background of Italian blue. The average height of the Cascades is between 3,000 and 4,000 ft., while the snow caps reach a height of from 8,000 to nearly 12,000 ft. Mount Hood, which is 11,931 ft. high, is the largest peak in Oregon and the one best known to tourists, as it is only about 60 miles from Portland, and is more accessible than the others. Unfortunately, at certain seasons the panoramic view of the mountains is hidden—by clouds in the winter months, and by smoke and dust during the late summer and fall; during which seasons the majority of tourists visit this region. The base of the Cascade Range is but a few hundred feet above sea level; so that these peaks may not be as high in altitude as the Rockies, which start from a base several thousand feet above sea level, yet these peaks of the Cascades are practically as large as any in the Rockies, and the slight isolation of each snow cap makes them much more picturesque.

It has been my good fortune to make two hurried trips to Mount Hood, including three ascents to the summit. Both trips were made in July, which is the best time for climbing, although the guides take parties up until into September. The distance from timber line [which is usually snow line in midsummer] to the summit is between four and five miles, the first three of which lead up a very easy incline, almost to the bare rocks kept warm by the steam from the small crater (?) After one walks a short distance over the snow fields, one notices numerous small pits in the snow, which at first appear to contain particles of dirt or pieces of bark. Upon closer observation, the bits of bark turn out to be beetles or some

other insect. Further search will disclose numerous representatives of nearly every order, with Coleoptera and Hymenoptera in the lead, although the Neuroptera are represented by numerous specimens of *Chrysopa* and allied genera. Insects were found on the surface and to the depth of five or six inches in the pits, and more than likely extend down into the solid glacial ice. Evidently, flying insects are carried upward over the snow by the strong winds which frequently sweep up the mountain side. As the insects become chilled, they drop to the snow, where they die; although they remain numb for some time, and occasionally the warm noonday sun will revive them, as was shown by an occasional beetle, whereas spiders seemed quite lively. During the summer months the surface of the snow fields becomes soft in the midday sun; and, since the bodies of insects are opaque, they absorb more heat than the surrounding snow, and hence the snow immediately beneath them melts more rapidly, eventually burying the insect. On one trip a sparrow and a plover were found frozen. The guide stated that some years the mountain side would be covered with frozen grasshoppers;—I presume some migratory species which occur on the eastern side of the mountains. In some seasons, portions of the rock at the very summit become bare, and I was told they were frequently almost covered with butterflies. In connection with this I might state that reliable parties told me that, upon climbing a small butte about 2,000 ft. high, here in the valley in the month of October, they found the top of the butte covered with millions of Coccinellids. This suggests that mountain tops might be useful factors in studying migrations of insects.

Beside the collecting on the snow fields, this mountain affords magnificent collecting at lower elevations, it being best along the banks of the many mountain brooks. The dead timber in the higher altitudes showed very few insects, although one would expect to find hosts of Cerambycids. The insect which appeared in its native haunts at the highest altitude was a species of ant. Colonies were found on small moraines completely surrounded by snow, which probably retreated later in the season. Doubtless, a study of the

insect fauna would show many species peculiar to each peak, or possibly only on one or two peaks, as is indicated by the work which has been done in botany upon Mount Rainier of Washington and some of the other neighboring mountains. The fact is, there are hundreds of undescribed insects to be found here in the Northwest, for even the valley fauna is far from being thoroughly known.

There are two Alpine clubs on the Pacific coast—the Mazamas of Portland, Ore., and the Sierra Club of San Francisco. Either of these clubs will gladly take any visitors who may wish to accompany them on their annual outings.

Collecting in Mexico.

By M. E. Hoag, D.D.S., Wapello, Iowa.

I recently returned from a three months' trip to Old Mexico, and will try to give some idea of the country I visited and the material to be had there.

At present writing I cannot make a complete list of all the species taken on the trip, but will do so as soon as possible.

The country to the south and east of Altamira, Mexico, is low and wet, while north and west it is rolling and covered with timber consisting of oak, chijol, mesquite, mahogany and undergrowth. At short intervals there are small parks or open spaces, and here are found a few flowering shrubs and creepers, but they seem to have very little attraction for butterflies or other insects.

A good collector in the north is not supposed to chase specimens, but if you wish to catch anything in the part of the country I visited, you will have to get a move on, for there is a stiff Gulf breeze, and everything seems to drift with this at a very fast gait. It is but seldom that one is fortunate enough to take anything sitting.

It is almost impossible to do any collecting in the woods, for the undergrowth is so dense that one can hardly force a way through, and it is impossible to use a net. Besides, if you get into the brush, you are sure to get covered with thousands of *Pinolias* and *Garopatas*, or woodticks. I believe they are all

the same, only in different stages of development. The *Pinolias* are very small and can hardly be seen, while the *Garopatas* are full size and full of business.

When I first reached Altamira, June 20th, there were very few species of Lepidoptera to be had, for the rainy season had just begun. The species mostly taken were: *Danais berenice* and *strigosa*, *Heliconius telchinia* and *charitonia*, *Eunides zorcaon*, *Colœnis julia* and *delila*, *Agraulis juno* and *vanillæ*, *Anartia fatima* and *jatrophæ*, *Myscelia ethusa*, *Ageronia ferentina* and *feronia*, *Cystineura amymone*, *Eurema perimede*, *albula*, *jucunda*, *delia* and *nicippe*, *Pieris monuste*, *protodice*, *amyrillis* and *viardii*, *Catopsilia philea*, *agarithe*, *argante*, *eubule* and *sennæ*, *Nathalis iole*, *Papilio montezuma* and *cresphontes*, *Kricogonia lyside* and *terissa*.

I took also a number of moths that I have as yet been unable to identify, but I noted all during the trip that Moths, Sphingidæ, Diptera, and Coleoptera were very scarce. Of *Catocala* I took none. Odonata were fairly plentiful here, and I took a good number of species. Hymenoptera were fairly represented, and there was a fair number of Coleoptera, but they were mostly of small species. Orthoptera were not well represented, and of Plecoptera I took none at all, although I made special effort to do so.

Scorpions, called by the Mexicans Carraballos, and the Whip-tails, called Vinagrios and greatly dreaded, were very plentiful.

I was taken with the yellow fever the first of July, and was confined to the house for several weeks, and during this time we had very heavy rains, and as a result there was a great increase in the number of species by the time I was able to be outdoors again.

On July 15th I saw the first *Victorina stenele*, and in a day or so *Gonopteryx clorinde* and *mærula*, besides several species of *Papilio*.

I made one trip to the woods north of Altamira, after my sickness, and took numbers of *K. lyside* and *terissa*, and *Gon. clorinde* and *mærula*. *Kricogonia* have a habit of sitting on the under side of leaves, and unless disturbed will escape the

collector, but after getting on to their ways they can be taken by hundreds. *Ageronia* also have a habit of sitting on lichen-covered trees, and are very hard to see at a distance of only a few feet.

I left Altamira the latter part of July, and started for San Luis Potosi, by way of Tampico. After leaving Tampico the road passes through low-lying country, grown to small timber and brush. In this part of the country there is a great abundance of flowers, and here I saw more specimens than during any other part of the trip. The species were *mostly* confined to the commoner ones, but there *were* some fine *Papilio* and other species. As the train would pass a water-hole the "flies" would rise in great clouds and beat against the car-windows.

As the road gradually reached higher ground, the vegetation and insect-life became more and more scarce until, at an altitude of 5000 feet, only a few Hesperidæ and other small, hardy "flies" were to be found. On the way up Rascon Mountain I saw one *Ithomia* and one *Morpho*, the only ones seen on the trip.

At San Luis Potosi there is very little to be had of entomological interest, and what there is is confined to the plazas, and the fields close to the irrigation ditches that come to the city from the dam situated some six miles to the west.

Here I took a number of *Papilio daunus*, *cresphontes* and *philenor*, and a few *Lycæna*, besides a good number of Odonata and a few Hymenoptera.

At a siding on the Mexico Central Railway, about fifty miles east of San Luis Potosi, there is a small valley that evidently gets a large supply of rain, and here I took a large number of *Papilio*, *Eurema mexicana* and a number of other "flies" not yet identified, besides a large number of species of Orthoptera and a few Odonata.

I left San Luis Potosi the last of August and went to Saltillo over the Mexican National Railway, but aside from a wreck, the trip was devoid of interest, for the road passes through a high table-land that is dry and barren.

From Saltillo I went southwest about 130 kilometers to the mining town of Concepcion del Oro, and there took mules,

and in company with Mr. Ludwig Heldt, mining engineer for the Mazipil Copper Company, went over the range to San Pedro del O'Compo and back to Concepcion by the foot of the mountains.

The trail from Concepcion is one of the most picturesque, and at the same time one of the most dangerous that I have ever crossed. In many places the trail is cut from the solid wall of granite, and one can look down hundreds of feet to the bottom of the cañons, and wonder how much there would be left to send home if the mule should make a misstep. The day was Sunday, and we met numbers of Peons with the whole family of children mounted on the one burro, going to town, there to spend and gamble away the whole of a week's wages. Occasionally a game-cock would be added to the rest of the load.

About noon we reached the top of the range, 10,000 feet, and were well repaid for the long, hard ride, for the view was grand beyond description. After a short rest, we started on the down trip, and reached the foot-hills about 2 P.M. Passing down an arroya, or cañon, we came to a fine spring of water, and stopped here for rest and lunch. In this dry waterway I saw a species of *Limenitis* that I was unable to take or identify, but aside from this there were very few specimens of interest to be seen on the mountains. The rest of the journey was through a barren cactus country.

After returning to Saltillo, I started for the States by way of Monterey, Eagle Pass, San Antonio and Kansas City.

On the down trip through Texas, Oklahoma, and the Territory, there was a great abundance of fine specimens to be seen along the track; but going back, everything had given up to the dry, hot weather, and there was nothing of interest.

The planters in Texas and the cotton country were feeling like "Jonah in the whale," for the boll weevil was at its worst, and the crop would be cut short by several hundred thousand bales.

As soon as I can collect my data, I will send in a list of all species taken on the trip.

A New Species of Gall-Wasp (Cynipidae) from Goldenrod (Solidago).

By A. Arsene Girault, Virg. Poly. Inst.

Aulacidea solidaginis Girlt. sp. n.

Description of Gall.—Large, irregular, curved, or knotted swellings of the stems; rough, surface generally bearing aborted growths; interior pithy, slate blue; tasteless; multicellular, the larval-cells large, and smooth interiorly. Length, varies; 5.5–10, 5 cm. Thickness, 1.6–2, 1 cm., through greatest diameter. Locality, Blacksburg, Virginia.

Described from 3 specimens.

These galls were collected during the winter, the adults emerging from June 2-8, 1903.

They are easily distinguished from the Lepidopterous (*Gelechia gallæ solidaginis*) and dipterous (*Trypeta polita*, *T. solidaginis*) galls occurring on Goldenrod. The galls of *Gelechia* are smaller, and hollow; those of *Trypeta* globular or long, pithy, and containing but one or two larval cells.

Description of Adults.—Female: length of body 2.8, 3 40 mm. Head and thorax black, rugose; face with a single median carina; mandibles tipped with black; abdomen glabrous, dark brownish, darker caudad, microscopically punctate; hypopygium blunt, the ventral spine long and prominent; legs rugose, or roughly striate, unicolored with antennæ, which are lighter than abdomen; venation prominent, dark; antennal joints cylindrical oval, 1 curved, sub-cuneate, equal to 3, 4, 5, 6 and 7, 2 smallest, cuneate, 8, 9, 10, 11 and 12 sub-equal, smaller than preceding joints, excepting second, sub-parallel; 1, 2 and basal one-third of 3, black with some brown, succeeding joints brownish, coarsely striate; 1 and 2 punctately sculptured; antennæ, 13-14 jointed, distal joint as long as preceding two combined (13-jointed), varying in length, equal to preceding joints (14-jointed).

Described from 29 specimens.

Male.—Length of body, 2, 2 95 mm. About same as female. Color basal joints of antennæ more variable, in the smallest specimen pitch

black, in the larger specimens black-brown, varying to color of succeeding joints; abdomen darker; face with prominent median carina.

Antennial joints cylindrical oval, 1 and 2 at least darker than succeeding joints; 1 and 3 swollen at distal end; antennæ, 14-jointed.

Described from 13 specimens.

42 specimens: 13 ♂'s, 29 ♀'s.

Resembles *Rhodites* and *Diastrophus*, but differs from the former in having the marginal cell open, antennæ of male 14-jointed, hypopygium blunt, and ventral spine very long; from *Diastrophus*, in having claws apparently entire, and mesothorax not polished, but rugose. Naturally falls into Ashmead's new tribe, *Aulacini*, occurring in galls on *Compositæ*, and thus easily separated from the foregoing genera.

Parasites numerous, mostly of the Chalcid genus *Eurytoma*.

I am indebted to Mr. Wm. H. Ashmead, U. S. N. M., for information bearing on this species, and for confirmation of its generic position; also for determination of some of its parasites.

Credit is due also to Mr. J. F. Strauss, Blacksburg, Virginia, for the figure.

A New Ephydridid from Australia.

By D. W. Coquillett.

Hydrellia tritici n. sp.

Head black, the face, cheeks and lower part of occiput white pruinose, a row of four bristles on lower part of each side of face and the adjoining cheek, antennæ and palpi black, proboscis brown; thorax and scutellum greenish black, mesonotum not pruinose, two pairs of dorsocentral bristles, the hairs between them arranged in two rows, a velvet-black spot above insertion of each wing, pleura and metanotum, except lower edge of the latter, white pruinose; abdomen bronze-green; legs, including the coxæ yellow, the front ones, except their coxæ and bases of their femora, black; wings hyaline, apex of second vein nearly three times as far from apex of first as from that of the third; halteres yellow. Length, 2 mm.

Perth, Western Australia. A specimen, bred from a wheat plant, received from the Acting Director of Agriculture. Also three specimens from Mittagong, Australia, received from Mr. W. W. Froggatt. Type, No. 7,003, U. S. National Museum.

Notes and Remarks on North American Blattidae, Mantidae and Phasmidae,

With a Catalogue of the Forficulidae, Blattidae, Mantidae and Phasmidae Recorded from Texas.

By James A. G. Rehn.

The following records, unless otherwise stated, are based on material in the collection of the Academy of Natural Sciences of Philadelphia.

BLATTIDÆ.

Ischnoptera bolliana Saussure and Zehntner.

Shovel Mount, Burnet Co., Texas; June 21 and July 25, 1901 (Schaupp). Two males.

Round Mountain, Blanco Co., Texas (Schaupp). Two males.

The specimens from Round Mountain belong to the form with the median streak of dull yellowish on the pronotum.

Ischnoptera hyalina Scudder.

This species was based on one male specimen in the collection of the American Entomological Society, which is still extant, though minus the abdomen. As the original description is rather poor, the following remarks may prove of some service.

Size large (for the genus); form slender, elongate. Head with the interspace between the eyes greater than that between the ocelli; eyes very elongate pyriform, the apex posteriorly; ocelli large, touching the eyes; antennæ filiform, equal to the apex of the tegmina in length, very closely and finely hirsute, third joint not half the length of the first. Pronotum slightly transverse; anterior margin truncate; the posterior subtruncate, a very slight and very obtuse median angle; lateral margins and angles rounded; lateral portions considerably depressed, disk slightly impressed. Tegmina elongate; sutural and apical and median thirds of the costal margin subparallel, apex evenly rounded; basal field equal to about one fourth the length of the tegmina; anal field elongate ovoid in shape. Anterior femora with three large apical, five median, and an intervening series of very fine spines present on the anterior margin, posterior margin with five spines, no genicular spine present; tibiæ about three-fourths the length of the femora; tarsi equal to the femora in length, the metatarsi slightly exceeding the apical joint in length. Median femora

with six apical and median spines on the anterior margin, posterior margin with the same number, genicular spine very long and slender; tibiæ about equal to the femora in length. Posterior femora with four spines on the apical half of the anterior margin; posterior margin with five spines on the apical half, genicular spine normally present;* tibiæ half again as long as the femora; tarsi about equal to the femora in length, metatarsi exceeding the remaining joints in length, arolia rather minute.

The color description given in the original is very good and describes the insect perfectly.

Habitat—Delaware.

MEASUREMENTS.

Total length,	25. mm.
"Length of pronotum,	4 25 mm."
"Breadth of pronotum,	6. mm."
"Length of antennæ,	25. mm."
"Length of tegmina,	21.5 mm."
Greatest width of tegmina,	6.25 mm.

This species is more closely related to *I. pennsylvanica* (De Geer) than any of the other species examined. It can be immediately distinguished by the larger size, different coloration and more longitudinal pronotum. Close relationship also exists with *I. uhleriana* Saussure, but the latter is a much smaller species, with a rugulose interocular region and a differently shaped basal field of the tegmina. It is quite possible that this species is the male of *Temnopteryx major* Saussure and Zehntner. Blatchley † has recorded the capture of males of *major*, and the type of *hyalina* agrees very well with his description. If such should prove to be the case, *major* must fall as a synonym of Scudder's species.

Ischnoptera uhleriana Saussure.

Shovel Mount, Burnet Co., Texas; July 7 and 10, 1901 (Schaupp). Two males.

Round Mountain, Blanco Co., Texas (Schaupp). Two males.

Ischnoptera unicolor (Scudder).

Boykins, Southampton Co., Va. (C. W. Johnson). One male.

* In the type both are absent, though this condition is seen to be accidental.

† The Orthoptera of Indiana, p. 183.

Ischnoptera pennsylvanica (De Geer).

Virginia. One female.

Lehigh Gap, Northampton Co., Pa.; July 24, 1903 (Rehn). One female.

I fully agree with Blatchley* as to the identity of *Phyllodromia borealis* and this species.

Eurycotis floridana (Walker).

Miami, Dade Co., Florida; June 28, 1899 (Pilsbry). One female.

Periplaneta americana (Linnæus).

Shovel Mount, Burnet Co., Tex.; October 16, 1901 (Schaupp). Twelve specimens,—three mature, nine immature.

Phœnix, Maricopa Co., Arizona; April 20 and 27, 1902 (Oslar). Two specimens, male and female.

Florence, Pinal Co., Arizona; May 21 and June 5, 1903 (Biederman). Two specimens, male and female.

Periplaneta australasiæ (Fabricius).

Philadelphia, Pa., June 30, 1898 (Rehn). One male.

Panchlora virescens (Thunberg).

Philadelphia, Pa. One male.

This specimen was undoubtedly imported on some tropical fruit, possibly bananas. Bananas received at Philadelphia are almost entirely from Jamaica. This is the first record for this species from the United States.

Plectoptera poeyi (Saussure).

Florida. One female.

This is the first record for this Cuban species in the United States.

Homœogamia apacha Saussure.

Florence, Arizona; May 8, June 6, July 15 and 17, 1903 (Biederman). Ten males.

Homœogamia erratica Rehn.

Florence, Arizona; June 8, July 17, 18 and 22, 1903 (Biederman). Eleven males (one immature).

* The Orthoptera of Indiana, pp. 179-180.

Cryptocercus punctulatus Scudder.

Blowing Rock, Watauga Co., North Carolina (Willcox). One female.

MANTIDÆ.

Yersinia solitaria Scudder.

Gallinas Cañon, San Miguel Co., New Mexico; July 20, 1902 (Oslar). One male.

This record extends the range of the species, which now covers the foot-hills and plain country from western Nebraska to northern New Mexico.

Litaneutria minor (Scudder).

Blanco Co., Texas. One male.

Shovel Mount, Burnet Co., Texas; June 28–July 25, Oct. 1–Nov. 17 (Schaupp). Thirty-two males, six females.

Tempe, Maricopa Co., Arizona; April 26, 1902 (Oslar). One male.

Florence, Pinal Co., Arizona; May 14, 19, and June 13, 1903 (Biederman). Four males, two females.

The series from Shovel Mount comprises thirty-eight specimens, and exhibits a very great diversity of coloration.

Stagmomantis carolina (Johannson).

Washington Co., Texas. One female.

Shovel Mount, Burnet Co., Texas; September–November 16th (Schaupp). Twelve males, one female.

Lake Valley, Sierra Co., New Mexico (Cope). Four males.

"Fort Yuma, Cal."* (Dr. J. K. Corson). One female.

The male individuals from Shovel Mount are, with one exception, very uniform in coloration.

Stagmomantis limbata (Hahn).

Shovel Mount, Burnet Co., Texas; Nov. 16, 1901 (Schaupp). One female.

Las Truchas, Guadeloupe Co., New Mexico [4600 feet] (Clara Gerhardt). One male, submitted by Prof. Cockerell.

Phœnix, Maricopa Co., Arizona. One male.

* This refers to California near the present town of Yuma, Arizona.

Oligonyx scudderi Saussure.

Shovel Mount, Burnet Co., Texas; October 4–18, 1901 (Schaupp). Five males, one female.

Arkansas. Collection of T. D. O'Connor, of New York City. One male.

PHASMIDÆ.

Megaphasma denticrus (Stål).

Shovel Mount, Burnet Co., Texas; July 5, 1901 (Schaupp). One male, one female.

The male is of rather small size when compared with an individual of that sex from Helotes Creek, Texas.

Diapheromera velii (Walsh).

Shovel Mount, Burnet Co., Texas; Sept. 12 and Nov. 16, 1901 (Schaupp). One male, one female.

A CATALOGUE OF TEXAN FORFICULIDÆ, BLATTIDÆ, MANTIDÆ AND PHASMIDÆ.

This catalogue is compiled from the references given by Scudder in his Index to North American Orthoptera, with the more recent additions interpolated. The records given in the preceding portion of this paper, and those from specimens contained in the collection of the Academy of Natural Sciences of Philadelphia are also included. This work, being in fact only a "first list," is necessarily very brief and somewhat unsatisfactory in character, but this is wholly due to the lack of definite localities, something greatly to be deplored when we consider the very extensive area and varied conditions of the great State of Texas.

FORFICULIDÆ.

Labidura "*riparia* (Pallas)." (Western?) Texas, March 10 (Pope).

Spongophora brunneipennis (Serville). Dallas, Dallas Co., Feb. 17 and 23, Aug. 19 (Boll). Clifton, Bosque Co., (Belfrage). "A common species, apparently, in all parts of the State." (Scudder).

Apterygida exilis (Scudder). Texas (Uhler).

Apterygida linearis (Eschscholtz). Texas (Uhler).

Labia guttata (Scudder). Bosque Co. (Belfrage).

Labia melancholica (Scudder). Waco. McLennan Co., or near Austin, Travis Co., Feb. 24 (Belfrage).

Labia minor (Linnæus). Abundant according to Scudder. Clifton, Bosque Co., June and September (Belfrage).

BLATTIDÆ.

Pseudomops cincta (Burmeister). Texas; recorded by Scudder.

Ischnoptera bolliana Saussure and Zehntner. Texas; recorded by Saussure and Zehntner. Shovel Mount, Burnet Co., June 21 and July 25, 1901 (Schaupp). Round Mountain, Blanco Co. (Schaupp).

Ischnoptera consobrina Saussure. Texas; recorded by Saussure and Zehntner.

Ischnoptera couloniana Saussure. Texas; recorded by Saussure and Zehntner.

Ischnoptera inequalis Saussure and Zehntner. Texas; recorded by Saussure and Zehntner.

Ischnoptera uhleriana Saussure. Texas; recorded by Saussure and Zehntner.

Temnopteryx texensis Saussure and Zehntner. Texas; recorded by Saussure and Zehntner.

Pelmatosilpha rotundata Scudder. Texas; recorded by Scudder.

Periplaneta americana (Linnæus). Texas; recorded by Scudder.

Homœogamia bolliana Saussure. Texas (Boll). Shovel Mount, Burnet Co., Sept. 2–Oct. 29 (Schaupp). Round Mountain, Blanco Co. (Schaupp). Austin, Travis Co., Feb. 19, 1903 (Wheeler). San Marcos, Hays Co. (Pilsbry). Devils River, Valverde Co. (Pilsbry). Pecos High Bridge, Valverde Co. (Pilsbry). Victoria, Victoria Co. Dallas, Dallas Co. Carrizo Springs, Dimmit Co. This is apparently one of the most abundant species of Texan Blattidæ.

Chorisoneura texensis Saussure and Zehntner. Texas (Boll).

MANTIDÆ.

Litaneutria minor (Scudder). Texas; recorded by Scudder. Shovel Mount, Burnet Co., June 28–July 25, Oct. 1–Nov. 17 (Schaupp). Blanco County.

Phasmomantis sumichrasti (Saussure). Texas; recorded by Saussure and Zehntner.

Stagmomantis carolina (Johannson). Texas; recorded by Saussure and Zehntner. Washington Co.; Shovel Mount, Burnet Co.; Sept.-Nov. 16 (Schaupp).

Stagmomantis limbata (Hahn). Texas (Schaupp). Ringgold Barracks, Starr Co. (Schott). Shovel Mount, Burnet Co.; Nov. 16, 1901 (Schaupp).

Brunneria borealis Scudder. Texas (A. Agassiz). Gulf coast of Texas (Aaron).

Oligonyx scudderi Saussure. Texas (Boll, Belfrage, Lincecum). Dallas, Dallas Co. (Boll). Shovel Mount, Burnet Co.; Oct. 4-18, 1901 (Schaupp).

Theoclytes chlorophæa (Blanchard). Recorded from Mexico and Louisiana, and in all probability will occur in Texas. Scudder has recorded a specimen from Matamoras, State of Tamaulipas, opposite Brownsville, Cameron County.

PHASMIDÆ.

Pseudosermyle strigata (Scudder). Texas (Boll, Lincecum).

Pseudosermyle banksii Caudell. Brazos County, September (Banks). Buna, Jasper Co., November 15, 1902 (Hopkins).

Megaphasma denticrus (Stål). New Braunfels, Comal Co. (Lincecum). Gulf Coast (Aaron). Helotes, Bexar Co. (Marnock). Victoria, Victoria Co. (Caudell). Shovel Mount, Burnet Co.; July 5, 1901 (Schaupp).

Diapheromera femorata (Say). Dallas, Dallas Co. (Boll). Ringgold Barracks, Starr Co. (Schott).

Diapheromera veliei Walsh. Dallas, Dallas Co. (Boll). Ringgold Barracks, Starr Co. (Schott). Pecos River [New Mexico or Texas] (Pope). Shovel Mount, Burnet Co. (Schaupp).

Anisomorpha buprestoides (Stoll). Texas (Boll).

Some North American Bees: Osmia and Triepeolus.

By T. D. A. Cockerell.

Triepeolus mesillæ, Ckll, var. *a.*

♀.—Scutellum with two very large spots; anterior lateral margins of mesothorax faintly reddish; pleura with a large red patch.

Hab.—Las Cruces, N. M., September 22, at rest, hanging by jaws on *Verbesina encelioides.* The color-variation here described nearly agrees with the normal coloration of the closely allied *T. bardus*, as given by Mr. Brues. The insect may be known from *bardus* by the conspicuous light hair about base of antennæ, the red anterior margin of clypeus, and the straight or barely curved scutellar spines. Perhaps *mesillæ* is not more than a geographical name of *bardus;* the latter occurs from eastern Texas to Illinois.

Osmia cerasi, Ckll.

Two females, not hitherto recorded, are from Las Cruces, N. M., April 10 (*C. H. T. Townsend*) and Santa Fe, N. M. (*Miss Myrtle Boyle*). The latter locality, being in the Transition zone, is rather surprising.

Osmia novomexicana, n. sp.

♀.—Length, 14 millim.; similar to *O. grandior* Ckll., but differing as follows; hair between antennæ very pale yellowish; head larger, the face being broader, facial quadrangle conspicuously broader than long; hair on thoracic dorsum brighter, that on scutellum a very lively ferruginous; hair on middle of first two abdominal segments all white, the first segment has a little, and the second much black hair at the sides; upper surface of abdomen brilliant prussian blue, only the basal parts of the segments, over which the other segments slide, being black. In my original description of *grandior* I say the clypeus is ordinary. This is not quite true; in *grandior* and *novomexicana* the anterior margin of the clypeus is produced, though the sides slope away gradually from the broadly truncate front edge. These bees belong to the group which Robertson has named *Centrosmia;* but the characters he indicates, based on *O. bucephala* do not hold good for all the allied forms. The malar space in *O. grandior* is practically obsolete, while in *O. novomexicana* it is distinctly present, but excessively narrow. In *O. grandior* the basal nervure falls a trifle short of the transverse-medial; in *O. novomexicana* they exactly meet. The head of *O. novomexicana* is hardly as big as the thorax; the clypeus is dull, with very dense, minute punctures; the apical tooth of the mandibles is considerably longer than the middle one; hair of pleura, cheeks and clypeus, and ventral scopa all black; legs black, without any metallic tinge.

Hab.—Arroyo Pecos, Las Vegas, New Mexico, June 7. (*Wilmatte P. Cockerell.*)

Osmia (Gnathosmia) mandibularis Cress.

Two females at Rociada, New Mexico, at flowers of *Carduus*, August 10 and 11 (*T. D. A.* and *W. P. Cockerell*). This beautiful and interesting species must fall in Robertson's group *Gnathosmia*, although the clypeus has no distinct keel. The species is new to New Mexico.

Osmia chlorops Ckll. and Titus. ♂.

This belongs to Robertson's group *Monilosmia*, and is closely related to *O. canadensis*.

Osmia iridis Ckll. and Titus. ♂

This has the first ventral segment of abdomen emarginate, and so seems to belong to Robertson's group *Xanthosmia*; yet it differs in having the sixth dorsal segment entire, and the fourth antennal joint not so long as 2 + 3. The basal nervure falls a fraction short of the transverso-medial; the second ventral segment is very large, with much black hair, and its hind margin is emarginate in the middle. The third ventral segment is nearly concealed by the second, and its margin fills the notch in the latter; so that, viewed from the side, the margin of the second seems quite entire; though, viewed from beneath, it is conspicuously emarginate. The apex of the abdomen is bidentate, as in most species. The apical tooth of the mandibles is long and sharp; the fifth joint of the maxillary palpi is minute.

In speaking of his interesting captures at Thomasville, Ga, Mr. Morgan Hebard refers to taking *Nisoniades nævius* there, and considers this its most northern record. I note also that Dr. Skinner, in his catalogue, gives only Indian River, Florida, as its locality. I thought until now, that it was well known as a member of the coast fauna of South Carolina. I have always found it abundant in the vicinity of Charleston, South Carolina, and occasionally as far inland as Clarendon County. On the sea coast islands, particularly the Isle of Palms (formerly known as Long Island) *Nisoniades nævius* and *petronius* and the little *Pholisora hayhursti* are regularly found in the summer months, the two former being especially characteristic and abundant in all the thistle patches that fill the opening in the Palmetto and Live Oak thickets.—ELLISON A. SMYTH, JR., Blacksburg, Va.

A COMMON method of gambling among criminal convicts in Siberian étapes is to spread down an overcoat or a dirty linen foot-wrapper on the floor of the kamera, and guess at the number of fleas that will jump upon it within a certain length of time. Every convict, of course, backs his guess with a wager. Another method, equally common, is to draw two small concentric circles on one of the sleeping-platforms, put a number of lice simultaneously within the inner circle, and then give all the money that has been wagered on the event to the convict whose louse first crawls across the line of the outer circle. Exiles on the road are not supposed to have playing-cards, but facilities for gambling in the manner above described are never lacking.—*Century Magazine, May, 1889.*

ENTOMOLOGICAL NEWS.

[The Conductors of ENTOMOLOGICAL NEWS solicit and will thankfully receive items of news likely to interest its readers from any source. The author's name will be given in each case, for the information of cataloguers and bibliographers.]

To Contributors.—All contributions will be considered and passed upon at our earliest convenience, and, as far as may be, will be published according to date of reception. ENTOMOLOGICAL NEWS has reached a circulation, both in numbers and circumference, as to make it necessary to put "copy" into the hands of the printer, for each number, three weeks before date of issue. This should be remembered in sending special or important matter for a certain issue. Twenty-five "extras," without change in form, will be given free, when they are wanted; and this should be so stated on the MS., along with the number desired. The receipt of all papers will be acknowledged.—ED.

PHILADELPHIA, PA., DECEMBER, 1903.

One of the most useful works that could be produced, and one that is badly needed in American entomology, is a reference catalogue of the Coleoptera. An essential feature of such a catalogue would be the distribution of the species. It would give an immense impetus to the study of this order of insects, and induce persons to name their material from original sources, whereas, at the present time, much of it is done by comparison, which makes collectors, but not students. It is often desirable to know something of the distribution of a beetle, and it is simply impossible to find it out without labor that is out of all proportion to the return. We know of nothing that would be a greater boon to workers in the order, and it would at once place the study of these insects on a much higher plane. To be sure, we have Gemminger and Harold's Catalogue, published (commenced) in 1868, but now antiquated and not accessible to many students. We have been unofficially informed that the National Museum would undertake the publication of such a work if an author can be found to prepare it. We hope we may have the pleasure of seeing this catalogue in the very near future.

141 LEPIDOPTERA captured in four hours at Meramec Highlands, St. Louis Co., Mo., April 12th, 1903.

We arrrved at the Highlands at 9.30 A. M. via. Frisco R. R. Mr. P.

Fischer of Buffalo, N. Y., and myself met Mr. Wm. Schneider and Mr. A. Neuman, both of St. Louis, got our nets out as soon as we got off the train, saw and captured *P. ajax walshii*, Lycænas and Nisoniades plentiful, went over to the Meramec River, captured *A. genutia*, *A. olympia rosa*, *Anæa andria*, *P. troilus*, *turnus* and *ajax walshii*, *T. irus*, *P. epimenis*, *P. protodice vernalis*, and many others, which kept us busy. The handle of my net broke about noontime, and as I had nothing to repair it with, made the rest of my captures with the frame and net in hand. I gave it up at 1.30 P. M. Counting up my four hours catch, I had 21 *A. olympia rosa*, 48 *A. genutia*–29♂ 19♀, 11 *N. brizo*, 7 *N. juvenalis*, 5 *N. horatius*, 8 *A. andria*–5♂ 3♀, 10 *P. ajax walshii*, 1 *P. troilus*, 2 *P. turnus*, 3 *P. epimenis*, 1 *T. irus*, 3 *P. protodice vernalis*, and 15 *Lycæna*. I didn't have time to paper them as I caught them. I had two cyanide bottles, with one I took them from the net, the other I used to store them in. I used the cyanide bottles for the small ones only, the large ones I papered as I caught them. I don't know how many the rest of the party caught, but judging from the way they were chasing around, I guess they all made good catches. Mr. Fischer of Buffalo thought Meramec Highlands a fine collecting place, so all entomologists who intend visiting the St. Louis World's Fair next year, should visit Meramec Highlands and take their nets along.—CHAS. L. HEINK.

HENICOPS.—Two species of the genus *Henicops* Newp , as defined by Latzel, have been reported from North America. One, the well-known European species *fulvicornis* Mem., ranges entirely across the northern section of our country. I have found it in good numbers in Utah, Idaho and Oregon; and it was previously known from New York, Minnesota, etc., and as far south in the Mississippi valley as Arkansas. The second species, *dolichopus* Chamb., known first from the upper parts of the Wahsatch mountains, I have since taken also at high elevations in the Rocky, Uintah and Sierra Nevada Ranges. From a study of Newport's type species, Pocock has now so restricted the genus *Henicops* as to exclude both the species mentioned above. The first, *fulvicornis*, must in consequence revert to the genus originally erected for it by Meinert, *i. e. Lamycter;* while *dolichopus* must go into another genus, *Zygethobius*, differing in having pores upon the last five pairs of coxæ instead of upon only the last four, in a different arrangement of the spiracles, and in other features.—R. V. CHAMBERLIN.

TELAGRION DÆCKII (ODONATA) AT RALEIGH, NORTH CAROLINA.—June 10, 1903, found the species common around the east edge of Felts swamp or marsh, a large open space of several acres filled with water and mud from ankle deep to nearly waist deep but very little open water; instead grown up with marsh grass, arrow arums, bonnet lilies, and in summer with introduced Egyptian Lotus On the east edge the marsh extends into woods and tall bushes. The males were found

mainly in partially shaded spots along the edge of the bushes. 25♂ and 1♀ taken.

June 13, took 65 males and about 15 females; males round edge of swamp as before; females and more males in drier and shadier places among the bushes, where there was little or no standing water and some few yards from east edge of swamp.

June 22, took some 15 females in same place as before; the species was common, but did not seem as numerous as on 13th.—C. S. BRIMLEY.

Doings of Societies.

The November meeting of the Newark [N. J.] Entomological Society was held November 8th, with President Engelman in the chair and fourteen members present. The minutes of the previous meeting were read and adopted.

The election of officers resulted as follows:

Mr. George J. Keller, President; Mr. George Stortz, Vice-President; Mr. O. Buchholz, Secretary; Mr. S. Seib, Treasurer; Mr. William Broadwell, Librarian; Mr. E. A. Bischoff, Curator, Coleoptera; Mr. H. H. Brehme, Curator, Lepidoptera.

Mr. Grossbeck reported the capture of three specimens of *Sciapteron tricincta*, Mr. H. Rummell the capture of an almost black specimen of *Melitaea phaeton* at Plainfield, May 31st. Mr. Buchholz reported the capture of the following specimens of Lepidoptera: *Sarrothripa lintneriana*, 7–30; *Arctia vittata*, 8–24; *Heterogenea textula*, 7–23; *Dryopteris rosea*, 9–10; *Acronycta vinnula*, 5–17; *Acr. superans*, 4–10; *Hadena remissa*, 6–16; *Hydroecia harrisii*, middle of September; *Hyd. speciosissima*, 10–1; *Hyd. marginidens*, 9–15; *Hyd. limpida*, 10–5; *Trileuca rectifascia*, 7–16—all in Elizabeth.

OTTO BUCHHOLZ, *Secretary*.

At the meeting of the Feldman Collecting Social, held October 21st, at the residence of Mr. H. W. Wenzel, 1523 S. Thirteenth St., Philadelphia, fifteen persons were present.

Dr. Castle, on behalf of Mr. J. H. B. Bland, recorded the capture of *Tachygonus spinipes* in abundance at English Creek, N. J.

Prof. Smith read an extract from the *Century Magazine* of 1889, describing a method of gambling in Russia by means of the movements of certain insects. [See page 333, *antea*.]

Dr. Castle suggested a method for mounting insects with smooth undersurfaces. Instead of fastening them by glue to slips, a small incision is made in the side of the insect, into which the slip is inserted.

Dr. Skinner suggested the immediate immersion of insects in gasoline in collecting, as they frequently injure themselves in fluttering about the collecting bottle.

Messrs. Wenzel and Smith said gasoline hardens the specimens, so that mounting is made difficult.

Dr. Dedrick spoke of the prevalence of body lice among the Esquimaux, and stated that the means adopted to rid themselves of the pest is to hang out their clothes and allow the insects to freeze, and by beating their clothes to dislodge the insects.

Mr. Laurent exhibited some live specimens of *Tenodera sinensis*.

Mr. Wenzel referred to the statement that the only eastern species of *Cicindela* attracted by light is *C. punctulata*. At Anglesea, N. J., he had observed *C. marginata* coming to light, and he believed all the species would be so attracted were the lights situated near their habitats.

Prof. Smith stated during the past summer he observed many specimens of May flies which had been beaten down by rain. Nearly all were females, and from the abdomen of each extended two strings of eggs, each being as large as the body of the insect. In this insect the ovaries have each a separate opening from the body, instead of opening into a single passage or vagina, as in most insects. During the summer he had collected 33 species of mosquitoes in New Jersey, and of these he had bred 31 species.

Mr. Daecke reported the capture of *Eucosma adamontona*. which, described from Lapland in 1825, has not been found until the present specimens were taken in New Jersey. He also exhibited *Belvosia bifasciata*, showing interruption in an auxiliary abdominal band on the second segment.

Dr. Skinner stated that two nests of *Polistes texanus* recently received had at least one-third of the specimens stylopized by *Xenos*. He hoped the members would collect *Polistes* with a view to rearing *Xenos*, and also *Stylops*, which occurs on species of *Andrena*. He believed *Xenos* coleopterous, and allied to the Rhipiphoridæ.

Prof. Smith stated that the occurrence of these insects with *Polistes* seems to be seasonal, sometimes being frequently found, and again in certain seasons being rare or not found at all.

Mr. Hardenberg corroborated Prof. Smith's statement that, as a rule, accurate data for specimens have not been attached to specimens by European collectors.

Mr. Wenzel stated that the Phymatodes mentioned at June meeting is *P. ater*, and not *aeneus*, as there given.

Mr. C. B. Hardenberg was elected a member.

WILLIAM J. FOX, *Secretary*.

A meeting of the American Entomological Society was held October 22d. Dr. P. P. Calvert, president, in the chair. Sixteen persons were present, including Dr. L. O. Howard, of Washington, D. C., corresponding member. The C. A. Blake collection of Lepidoptera was formally presented, and a vote of thanks tendered the family of Mr. Blake.

Mr. H. W. Wenzel referred to a recent paper by William Beutenmuller on the Coleoptera from the Black Mountains of North Carolina. The speaker said he had all the species described. LeConte's species, *Cychrus violaceus*, was mentioned, and a series exhibited showing very considerable variation. Other species mentioned in the paper were shown.

Dr. Howard expressed his pleasure at being present as a member. He spoke of certain critical views expressed as to American entomology, and said Americans lead the world in economic entomology, and hold their own in systematic work. He also mentioned the monograph he was preparing for the Carnegie Institute, on the Culicidæ, and said a number of entomologists, under his direction, were rearing mosquitoes in various parts of the country. Fifty species had been studied

to date and their life-histories discovered. The great amount of work recently done had made his former work on mosquitoes obsolete. In a work published a few years ago on Insect Parasitism, he mentioned the fact that *Anthrenus varius* fed on the debris of the cocoons of the Tussock moth. This year the moth was said to be scarce, on account of the same species feeding on the living egg masses.

Dr. Castle spoke of the difficulty of mounting smooth-bellied beetles on card mounts and he had devised a new method, which consists of making an incision into the side of the insect, into which the end of the cardboard point is inserted.

Mr. Laurent exhibited a specimen of *Plusia verruca* collected by Dr. Castle in Florida. Mr. Daecke exhibited beetles taken at Manumuskin, N. J.: *Pachnæus distans*, new to the State, and *Bellamira scalaris*, which has a northern range. Specimens of *Micrathyria berenice* showing variation were exhibited. In rearing mosquito larvæ in a jar, he had noticed many missing, and found they were being devoured by water *Hydra*. The living larvæ of *Corethra* were shown.

Dr. Calvert said the species of dragon-fly, *M. berenice*, was the one reared from salt water larvæ by Mr. Viereck. The water was about one-half as salty as that of the ocean.

Dr. Howard said that Dr. H. T. Fernald had called attention to the fact that *Hydra* eat mosquito larvæ. Dr. Calvert spoke of the recent work by Dr. Sharp on the Coleoptera of Hawaii, and mentioned wingless beetles, the absence of wings being an advantage to them. Collecting on mountains was discussed, especially in the snow. Dr. Howard gave an account of an ascent made by Prof. Poulton in the mountains of British America, in search of insects.

HENRY SKINNER, *Secretary*.

A meeting of the Entomological Section of the Chicago Academy of Sciences (Chicago Entomological Society) was held in the John Crerar Library, October 15, 1903. Eight members present. President Longley occupied the chair.

Mr. Kwiat took the floor and led a discussion on the genus *Crocota*. He exhibited a number of specimens of *Crocota* (*Eubaphe*), and spoke of his efforts to identify them.

The literature on the subject is widely scattered and not at all accessible. He was able to identify positively only one species—*E. laeta*. Among a series of specimens from St. Louis, he had one female agreeing fairly well with the description of *E. opella*, the others of the series grading into what Mr. Kwiat called *belmaria*, from New Brighton, Pa.

Of this latter series, one specimen (♀) answered quite well to Ehrman's description of *E. rubricosta*, but the red is not as pronounced as the description indicates.

The remaining forms (of which there were five or six) are no doubt in *E. immaculata* and *E. aurantiaca* and its varieties. What Mr. Kwiat believed to be *E. immaculata* and its variety *trimaculosa* failed to answer to the description in that they lacked the rose color entirely. Mr. Longley, however, exhibited two specimens of the same form with quite a pronounced rosy tinge; so the identification is probably correct.

E. aurantiaca, var. *quinaria*, was easily identified, and Mr. Kwiat expressed the opinion that these might prove to be the ♀ ♀ of *immaculata*, they having been taken in the same locality as *immaculata*, and his entire catch of that species, some thirty specimens, being all males.

He has one female with primaries of a deep chocolate brown with three white spots, and secondaries yellow, slightly tinged with reddish, having a heavy black discal mark and two large submarginal spots. This specimen resembles the *immaculata* form very closely in general appearances. Mr. Kwiat declined to express an opinion on the others, although *brevicornis* was undoubtedly represented by typical specimens.

He expects to continue his study of the genus, and will make an effort to procure eggs and larvæ for breeding purposes

Mr. Longley exhibited a number of specimens.

Informal discussion followed Mr. Kwiat's talk.

JOHN COMSTOCK,
Recorder, Entomological Section.

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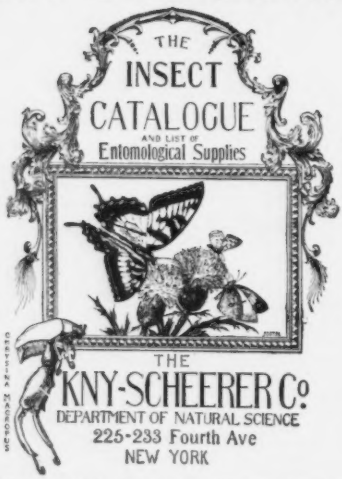

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